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EXAMINER	
SIMITOSKI, MICHAEL J	

ART UNIT	PAPER NUMBER
2134	

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/805,156	HASEBE ET AL.	
	Examiner	Art Unit	
	Michael J. Simitoski	2134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 August 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28 and 39-44* is/are pending in the application.

4a) Of the above claim(s) *39-42* is/are withdrawn from consideration.

5)☒ Claim(s) *2 and 11-18* is/are allowed.

6)☒ Claim(s) *1,3-10,19-28,43 and 44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 March 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The response of 8/22/2005 was received and considered.

2. Claims 1-28 & 39-44 are pending.

3. Applicant's amendments to the specification are accepted.

Election/Restrictions

4. Newly submitted claims 39-42 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claims 39-42 are directed to accepting requests from a plurality of managers at least one the managers having a higher priority for acceptance, classified in class 709, subclass 248, not requiring accepting requests from any manager before accepting a date-and-time setting request only from a predetermined manager. The invention of claims 39-42 is related to the inventions of the remaining claims as subcombinations usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, the invention of claims 1-28 & 43-44 has separate utility such as accepting requests from any manager, after which only a request from a specified manager is accepted, not requiring a manger to have a higher priority than another. See MPEP § 806.05(d).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 39-42 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Response to Arguments

5. Applicant's response (p. 12) argues that Hartman, Jr. fails to disclose requests from "multiple devices capable of setting the date and time and accepting such requests from any of them. However, the applications in Hartman, Jr. manage their tasks based on the date and time of the computer being authenticated or not authenticated. Therefore, the applications are date and time managers that request the current date-and-time setting. Furthermore, the applications request a TOD clock readout, and the requests are all accepted when the time is authenticated. However, when the time is no longer authenticated, the clock will only accept a request from a predetermined manager/application (one that uses non-secure time).

6. Applicant's response (pp. 12-13) argues that Cisco fails to disclose "accepting a date-and-time setting request from any date-and-time manager before accepting a date-and-time setting request from a predetermined date-and-time manager". However, Cisco discloses accepting a date-and-time setting request from any date-and-time manager (the NTP server sending periodic updates, p. 3, ¶1) from any date-and-time manager (any one on the list) and only accepting a date-and-time setting request from a predetermined/authenticated date-and-time manager (when authentication is switched from disabled to enabled, authentication is required for a date-and-time setting request to be accepted and therefore only a manager/NTP server with the correct key can update the time).

7. Applicant's response (pp. 12-13) argues that Cisco fails to disclose how the concept of "accepting a date-and-time setting request only from a date-and-time manager at a higher hierarchical level than the date-and-time manager whose request has been accepted before". This argument is persuasive.

8. Applicant's response (p. 13) regarding the Shiakallis reference is persuasive. Shiakallis does not disclose the setting of the clock by anyone.

9. Regarding the claims in general, Applicant should be aware that, for instance, setting a BIOS password is well known in the art. For instance a new personal computer will often have no password or a default password that is required to access the BIOS settings, allowing all users/managers access to changing the system clock. However, once a BIOS password is set, the date-and-time setting can only be changed by the user with the password. This is well known in the art. While in this situation, the acceptance of the request from *only* a predetermined manager is not *caused by* the accepting of a date-and-time setting request from the predetermined manager, the claims to not recite this.

Further, the cited Microsoft Windows NT 4.0 Security, Audit, and Control discloses how Windows assigns rights to users, where for a certain task such as the shown "Access this computer from network", all of the listed users have the right to perform that task (p. 132), but users can be removed from the list (p. 132, figure). One of the standard rights in Windows NT is the right to change the system time (p. 133). Therefore, as the claimed invention does not claim accepting a request only from the predetermined date-and-time manager *as a result* of accepting a date-and-time setting request from the predetermined date-and-time manager, simply removing all users but one from the list of users who can perform the "change the system time" task in Windows reads on the claimed invention. Regarding the language of claim 2, if both "administrator" and "power user" (as in p. 135) are allowed to change the system time, and the power users group is removed from this right, then a date and time request will only be accepted from a date-and-time manager at a higher hierarchical level. Similarly, if both a guest

account/manager and an administrator account/manager are allowed to change the system time and the administrator in response to the guest changing the system time deletes the guest account, these actions read on the claims. The previous tasks are well known in the art of system administration.

Claim Objections

10. Claim 9 is objected to because of the following informalities: "accept" (line 4) should be replaced with "accepts". Appropriate correction is required.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,444,780 to Hartman, Jr. (**Hartman**). Hartman discloses a date-and-time setting request reception unit/client (col. 6, lines 35-37) accepting a date-and-time setting request from any date-and-time manager/application before accepting a date-and-time setting request from a predetermined date-

and-time manager/application (requests are accepted from applications requiring secure TOD and non-secure TOD because the authenticated time indicator is TRUE) (col. 6, line 65 – col. 7, line 12) and accepting a date-and-time setting request only from the specified date-and-time manager/application requiring non-secure TOD after accepting a date-and-time setting request from the specified date-and-time manager (once the authenticated time indicator = FALSE again, the applications that require a secure TOD are denied access) (col. 6, lines 59-60 & col. 9, line 50 – col. 10, line 2) and a clock unit functioning in response to the accepted date-and-time request (Fig. 1, #108).

13. Claims 1 & 3 are rejected under 35 U.S.C. 102(a) as being anticipated by "System Time Management" by Cisco Systems, Inc (**Cisco**), April 2000.

Regarding claim 1, Cisco discloses a date-and-time management apparatus/switch comprising a date-and-time setting request reception unit/switch accepting a date-and-time setting request/time from any date-and-time manager/NTP server (p. 3, § Configuring NTP Authentication) before accepting a request from a predetermined date-and-time manager/authenticated NTP server, and accepting a date-and-time setting request only from the specified date-and-time manager/authenticated NTP server after accepting a date-and-time setting request from the specified date-and-time manager/authenticated NTP server (p. 3, § Configuring NTP Authentication) and a clock unit/clock functioning in response to the accepted date-and-time setting request (p. 3, § Configuring NTP Authentication).

Regarding claim 3, Cisco discloses a date-and-time management device/switch (p. 3) for a manager on the date-and-time manager side (p. 1, ¶1-4), wherein said date-and-time

management device for the manager comprises a date-and-time setting request unit/switch for issuing to said date-and-time setting request reception unit/switch a copy request/synchronization request (p. 3) for a date-and-time managed by said device/switch as the date-and-time setting request.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Cisco**, as applied to claims 3 & 11 above. Cisco is silent regarding the delivery of the date-and-time management device for the manager. However, the Examiner takes Official Notice that initializing a product upon delivery is old and well established in the art of communication equipment distribution as a method of activating a product. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a deliverer with a date and time setting device for setting the date and time of the date-and-time management device for each manager upon delivery. One of ordinary skill in the art would have been motivated to perform such a modification to activate the device and enable further use. This advantage is well known to those skilled in the art.

16. Claims 4-6, 19-22 & 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Cisco**, as applied to claims 3 & 11 above, in further view of Handbook of Applied Cryptography by Menezes et al. (**Menezes**).

Regarding claims 4-6, Cisco discloses a copy data generation unit/switch for generating data for copying of the date and time (updating the time) (p. 3), but lacks using non-reproducible information received from the management device that accepted the request and the date-and-time managed by said management device that issued the date-and-time request. However, Menezes teaches that to prevent replay attacks in protocols, nonces are used, which is a non-repeating value included in the protocol messages (pp. 397-398, §10.3.1). Menezes further teaches that when transporting keys from an authority to a user, digital signatures are used to authenticate the data (p. 507, ¶2 & p. 570, Remark 13.37) and can include non-repeating values such as sequence numbers to prevent replay attacks (p. 570, Remark 13.37). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to generate data for copy of the date-and-time by encrypting the information about the managed date-and-time (date and time) and the non-reproducible information (random/nonce) to generate the data for copy of the date and time (updated, verified time). One of ordinary skill in the art would have been motivated to perform such a modification to verify that a time has not been modified (data verification) and that the time update has not been replayed, as taught by Menezes (pp. 397-398, §10.3.1, p. 507, ¶2 & p. 570, Remark 13.37).

Regarding claims 19 & 20, Cisco discloses a date-and-time management apparatus/switch comprising a date-and-time setting request reception unit/switch accepting a date-and-time setting request/time from any date-and-time manager/NTP server (p. 3, §

Configuring NTP Authentication) before accepting a request from a predetermined date-and-time manager/authenticated NTP server, and accepting a date-and-time setting request only from the specified date-and-time manager/authenticated NTP server after accepting a date-and-time setting request from the specified date-and-time manager/authenticated NTP server (p. 3, § Configuring NTP Authentication) and a clock unit/clock functioning in response to the accepted date-and-time setting request (p. 3, § Configuring NTP Authentication). Cisco lacks a signature generation unit generating a signature for input data to be signed according to information about a date-and-time indicated by said clock unit. However, Menezes teaches that a trusted time stamping service provides a user with a dated receipt by appending a timestamp to a document and signing the composite document (p. 581, §13.8.1). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the network time protocol described by Cisco in a trusted time stamping service. One of ordinary skill in the art would have been motivated to perform such a modification to provide a user with a dated receipt, as taught by Menezes (p. 581, §13.8.1).

Regarding claims 21 & 25, Cisco, as modified above, lacks explicitly a signature stop unit. However, the examiner takes Official Notice that stopping a calculation when a required input is unavailable is old and well established in the art of data processing as a method of avoiding invalid results. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a signature stop unit to stop the signature generation unit when an operation stop of said clock unit is detected. One of ordinary skill in the art would have been motivated to perform such a modification to avoid invalid time stamping results, as a time will not be inputted. This advantage is well known to those skilled in the art.

Regarding claims 22 & 26, Cisco, as modified above, discloses one ore more functions/switching packets.

17. Claims 8 & 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Cisco**, as applied to claims 1 & 2 above, in further view of U.S. Patent 6,157,957 to **Berthaud**.

Regarding claim 8, Cisco, as described above, lacks a nonvolatile storage memory. However, Berthaud teaches that to guarantee a pre-specified precision, correction information/conversion function information is calculated (col. 9, lines 19-29) and stored in non-volatile memory (col. 7, lines 1-5). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a nonvolatile storage unit storing correction information. One of ordinary skill in the art would have been motivated to perform such a modification to guarantee precision, as taught by Berthaud (col. 7, lines 1-5 & col. 9, lines 19-29)

Regarding claim 10, Cisco is silent about a secondary battery. However, the examiner takes Official Notice that including a secondary battery, as a power source to a clock is old and well established in the art of electronic, clocked devices as a method of retaining power to the clock if the power to the device is removed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a secondary battery as a power source of said clock unit. One of ordinary skill in the art would have been motivated to perform such a modification to retain clock functionality when power is removed. This advantage is well known to those skilled in the art.

18. Claims 23 & 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Cisco** & **Menezes**, as applied to claims 19 & 20 above, in further view of U.S. Patent 5,444,780 to Hartman, Jr. (**Hartman**). Cisco, as modified above, lacks storing information about a date-and-time setter who has issued a date-and-time setting request and generating a signature according to the information about the date-and-time setter in addition to the date-and-time information. However, Hartman teaches that in some schemes for sending an updated time from a device to a client, the device encrypts an authenticated code using a secret key, a time value and an authenticated device ID (col. 2, lines 30-45). This is done to establish trust between the device and the client (col. 1, line 66 – col. 2, line 3). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to store date-and-time setter information and generate a signature according to information about the date-and-time setter. One of ordinary skill in the art would have been motivated to perform such a modification to establish trust between the date-and-time setter and the management device, as taught by Hartman (col. 1, line 66 – col. 2, line 3 & col. 2, lines 30-45).

19. Claims 24 & 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Cisco** & **Menezes**, as applied to claims 19 & 20 above, in further view of U.S. Patent 6,199,169 to **Voth**. Cisco discloses authenticating the NTP messages (p. 3), but lacks storing a number of setting requests and generating the signature according to information about the frequency information in addition to the date-and-time information. However, Voth teaches that to update distributed time devices with variable transmission delay (col. 2, lines 27-44), it is useful to send the adjustment time/date-and-time info and time changes/frequency information (col. 5, lines 6-17).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to store a number of setting requests/time changes and to include this information in the signature. One of ordinary skill in the art would have been motivated to perform such a modification to update distributed time devices with variable transmission delay with authenticated time correction information, as taught by Voth (col. 2, lines 27-44 & col. 5, lines 6-17).

20. Claims 43-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,717,955 to **Swinehart** in view of **Cisco**. Swinehart discloses management devices/UserAgents, each including a setting request (col. 11, lines 25-35), and user devices/DeviceAgents, each including a reception unit accepting an initial setting request (col. 11, lines 56-60) from any management device/UserAgent before accepting a prioritized setting request from a specified management device/UserAgent claiming ownership (owner has priority), and accepting subsequent settings requests only from the specified management device/UserAgent claiming ownership after accepting the prioritized setting request from the specified management device/UserAgent claiming ownership (col. 11, lines 44-46). Swinehart lacks the request being a setting request for date and time and lacks a clock unit setting the date and the time in response to each setting request accepted by said reception unit. However, Cisco teaches a reception unit/switch receiving a setting request for date and time (p. 3, ¶1) and a clock unit/switch setting the date and the time in response to each setting request accepted by said reception unit/switch (p. 3, ¶1). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Swinehart to allow the UserAgent to

take control of a DeviceAgent's time setting and to include a clock unit setting the date and time. One of ordinary skill in the art would have been motivated to perform such a modification to update the time on a client, as taught by Cisco (p. 3, ¶1).

Allowable Subject Matter

21. Claims 2 & 11-18 are allowed.

22. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

23. The following is a statement of reasons for the indication of allowable subject matter:

a. Regarding claims 2 & 11-18, the prior art relied upon fails to teach or suggest accepting a date-and-time setting request only from a date-and-time manager at a higher hierarchical level than the date-and-time manager whose request has been accepted before in combination with the other elements of the claims.

b. Regarding claim 9, the prior art relied upon fails to teach or suggest a correction information resetting unit resetting the correction information when said clock unit becomes short of power, power is applied to said unit and said date-and-time setting request reception unit accepts a date-and-time request.

Conclusion

24. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Simitoski whose telephone number is (571) 272-3841. The examiner can normally be reached on Monday - Thursday, 6:45 a.m. - 4:15 p.m.. The examiner can also be reached on alternate Fridays from 6:45 a.m. – 3:15 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached at (571) 272-3838.

Any response to this action should be mailed to:
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450
Or faxed to:
(571) 273-8300
(for formal communications intended for entry)
Or:
(571) 273-3841 (Examiner's fax, for informal or draft communications, please label "PROPOSED" or "DRAFT")

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJS
October 4, 2005

GREGORY MORSE
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